

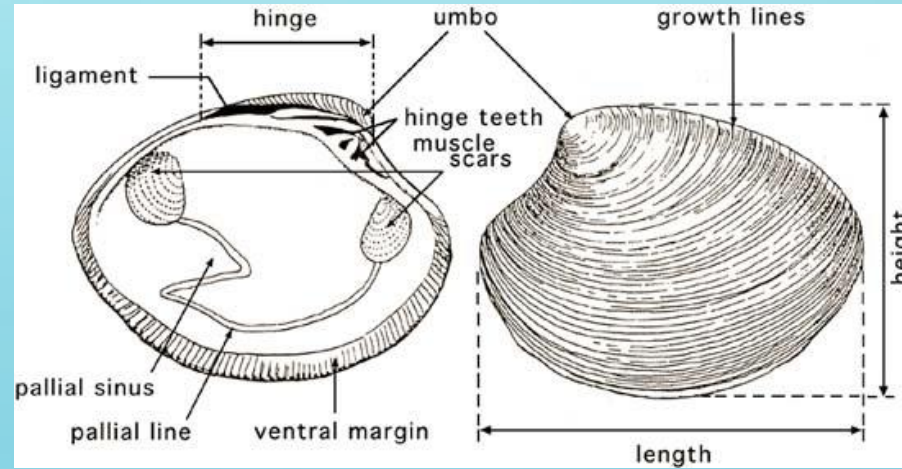
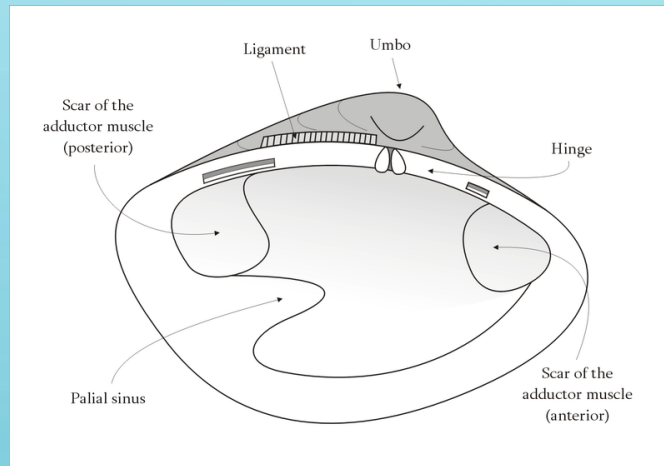
Class Bivalvia



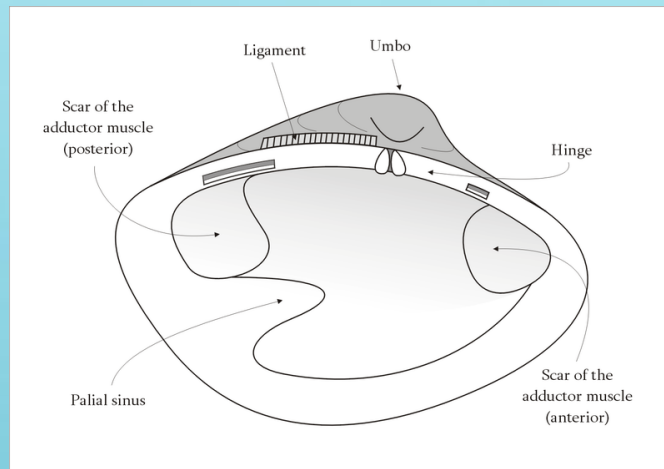
Dr. Saritha S
Asst. Professor
School of Fisheries
CUTM, Paralakhemundi

Morphological features

- ❑ Laterally compressed bodies enclosed by a shell in two hinged parts.
- ❑ these include oysters, clams, mussels, cockles and scallops.
- ❑ The majority are filter feeders and have no head and radula.
- ❑ The gills have evolved into ctenidia, specialised organs for feeding and breathing.
- ❑ Most bivalves bury themselves in sediment on the seabed, while others lie on the sea floor or attach themselves to rocks or other hard surfaces.
- ❑ The shell of a bivalve is composed of calcium carbonate, and consists of two, usually similar, parts called valves.
- ❑ These are joined together along one edge by a flexible ligament that, in conjunction with interlocking “teeth” on each of the valves, forms the hinge.



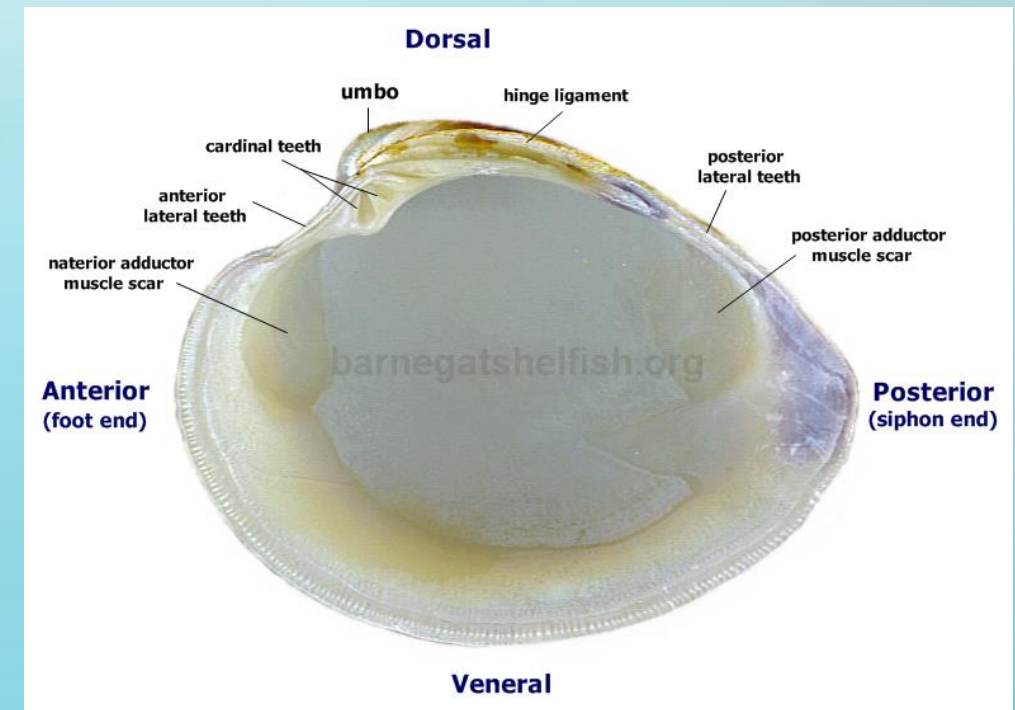
- Adult shell sizes of bivalves vary from fractions of a millimetre to over a metre in length, but the majority of species do not exceed 10 cm
- At the dorsal or back region of the shell is the hinge point or line, which contain the umbo and beak and the lower, curved margin is the ventral or back region.



Giant clam- *Tridacna gigas*

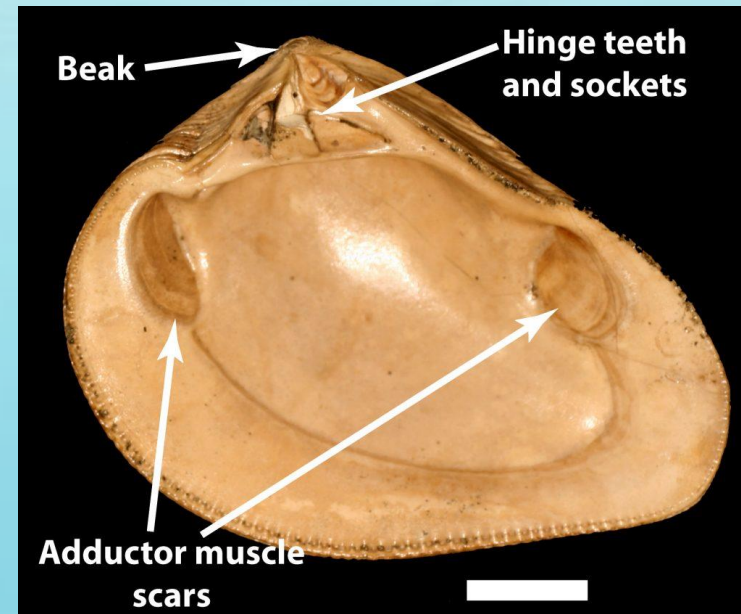
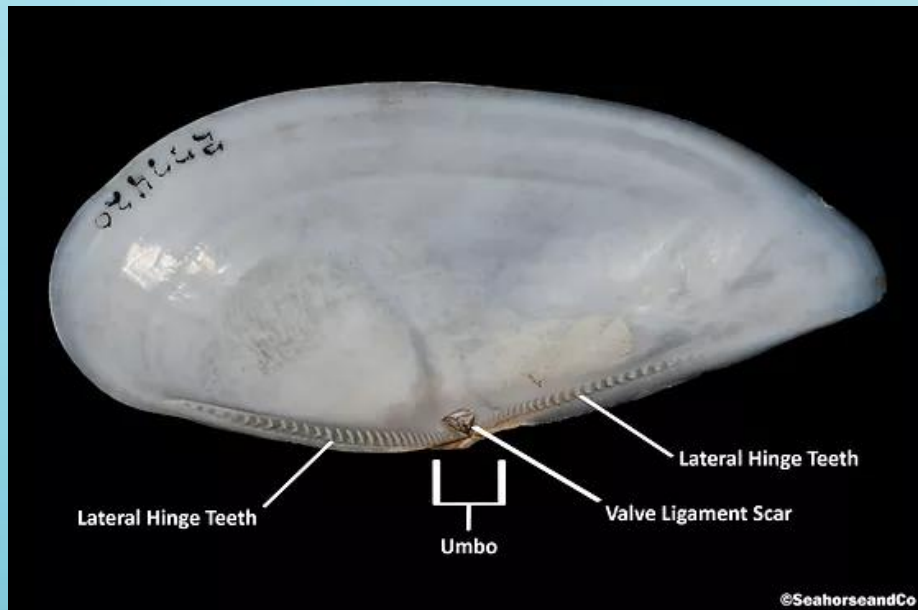
Umbo

- The **umbo** (plural **umbones** or **umbos**) is the vaguely defined, often most prominent, highest part of each valve of the shell of a bivalve or a univalve mollusc.
- The umbo forms while the animal is a juvenile, and radial growth subsequently proceeds around that area.
- The umbo is situated above the hinge line



Hinge Line

- A **hinge line** is an imaginary longitudinal line along the dorsal edge of the shell of a bivalve mollusk where the two valves hinge or articulate
- The hinge teeth, structures which control the articulation of the valves, are often but not always situated along the hinge line



Lines of Growth

- The outer surface of each shell valve presents a number of concentric lines around the umbo as center and running parallel to the free large of the shell.
- These are the lanes or benign of growth, representing intervals between successive growth stages
- The shell increase in size by the deposition of new rings around the outer rim of the shell each year.
- Rings that are far apart indicate periods of rapid growth, owing to a plentiful food supply; periods of restricted growth are represented by close-fitting rings.
- The rings representing the dormant periods of the winter months are more conspicuous so that it is possible to estimate the age of a clam by these rings.

